I. INTERNATIONAL APITHERAPY AND NATURE CONGRESS

IANCO23

1-3 June 2023

NAKHCHIVAN

PROCEEDING BOOK

EDITOR

OKTAY YILDIZ

ISBN:978-625-00-1310-6

Congress languages: Turkish - English - Azerbaijani – Russian

CONTENTS

DEAR PARTICIPANTS.....ii

HONOR BOARD.....iii

CONFERENCE CO-CHAIRS.....iv

ORGANIZING BOARDS.....v

CONFERENCE SECRETARY.....vi

SCIENTIFIC COMMITTEE.....vii

SPONSORS.....x

CONGRESS PROGRAM.....xi

FULL TEXT PAPERS.....1

Determination of the Ideal Extract Options for Bee Bread by Ultrasound-Assisted Extraction.....2

Huseyin SAHIN, Zehra CAN, Yakup KARA, Aysenur YILMAZ

Digger Wasps of The Tribe Larrini (Crabronidae: Crabroninae) of The Nakhchivan Autonomous Republic.....12

Mahir MAHARRAMOV, Akif BAYRAMOV

Pharmacologıcal Effect and Pharmacognostıc Study of The Specıes Belongıng to the Prangos L. Genus Spreadi in the Flora of Azerbaıjan.....27

Aida ORUJOVA, Afruz NASIROVA

An Observational Study on the Effect of Living Conditions on the Awareness of Alternative Medicine Practices: The Case of Ağrı Province.....31

Sait YILDIRIM, Pınar ARAS

Symptoms and Treatment Methods of Hypermetropia in the Eye.....38

Leylabeyim Mirmammad gizi SEYİDOVA

Mathematical Modeling of the antioxidant capacity of propolis.....48

Mualla YALÇINKAYA, Sevgi KOLAYLI, Oktay YILDIZ

Method of Apitherapy: Treatment with Honey.....57

Shafa KARIMOVA

Application of Nanotechnology in Medicine.....61

Gülten BULUT

Potential Effect of Propolis Extract on Restoring Hepatic Dysfunction in Streptozotocin-Induced Diabetic Rats…….240

Hadjer CHENINI-BENDIAB, Kerroum FAYCEL, Hamidi CHAIMAA, Noureddine DJEBLI

Histological study of the antidiabetic effect of Propolis extract in streptozotocin-induced diabetic rats ……241

Hadjer CHENINI- BENDIAB, Radjaa KADA , Hassiba KHECHAI, Noureddine DJEBLI

Rational Drug Use in Stress Ulcer Prophylaxis at a Tertiary Care Hospital in Northern Cyprus…….242

Syed Sıkandar SHAH

The Importance of Bee Products in The Treatment of Stress…….244

Quliyeva ŞƏHLA

Use of DNA Markers in Plant Genetics and Breeding…….245

Sudabe HASANOVA, Seide HASANOVA, Fatime BABAYEVA

Synthesis of a New Compound of Diphenylquanide and Its Study as a Corrosion Inhibitor……247

Giyas BAYRAMOV

Environmental Impact of Waste Gas Formed At Baku Steel Smelting Plant……249

Sevinc HACIYEVA, Qiyas BAYRAMOV, Nailə CƏFƏROVA

On The Study of Stinging Hymenoptera (Hymenoptera: Aculeata) of The Nakhchivan Autonomous Republic……250

Mahir MAHARRAMOV

Identification and Characterization of Inhibitors from Propolis Extracts againts HIV-1-Reverse Transcriptase ……254

Ali Osman BELDUZ, Fulya AY SAL, Halil İbrahim GULER, Oktay YILDIZ, Sevgi KOLAYLI, Miray SAHINKAYA, Orcan DEMIRCAN, Serap PEKTAS

Useful Properties of The Unabi Plant (Ziziphus) ……256

Ramiz ALAKBAROV, Hilal GASIMOV, Zahrakhanum ABBASZADEH

Development of Olive Varieties Introduced At The Institute of Dendrology on Envionmental Factors and Their Significance in Medicine……258

FULL TEXT PAPERS

On The Study of Stinging Hymenoptera (Hymenoptera: Aculeata) of The Nakhchivan Autonomous Republic

Naxçıvan Muxtar Respublikasının İynəli Zarqanadlılarının (Hymenoptera: Aculeata) Öyrənilməsinə Dair

По Изучению Жалящих Перепончатокрылых (Hymenoptera: Aculeata) Нахчыванской Автономной Республики

Mahir MAHARRAMOV

Nakhchivan State University

***Corresponding author** / Mahir Maharramov

Abstract

Information about the first entomological research carried out on the territory of the autonomous republic, belong to the second half of the XIX century. The first studies of stinging hymenoptera on the territory of the Nakhchivan Autonomous Republic refer to the works of F. Morawitz. Thus, the first description of the species Coelioxys castanea was given by him in 1886 on the basis of materials collected in Julfa. Until the second half of the XX century, studies of stinging hymenoptera in the autonomous republic were carried out by foreign experts and were very poorly studied. Research of local specialists began in 1978, H.A. Aliyev, G.F. Huseynzade and M.G. Aliyeva were engaged in research of stinging hymenoptera in the autonomous republic. Since 2004, M.M. Maharramov began a comprehensive study of the stinging hymenoptera of the Nakhchivan AR. Over 18 years of research, it has been established that the fauna of stinging hymenoptera of the Nakhchivan Autonomous Republic includes 737 species and 9 subspecies belonging to 148 genera for 14 families.

Keywords: Nakhchivan, Apidae, Sphecidae, Crabronidae, Vespidae.

Xülasə

Muxtar respublika ərazisində aparılmış ilk entomoloji tədqiqat işləri haqqında məlumatlar XIX əsrin II yarısına təsadüf edir. Naxçıvan MR-də neştərli zarqanadlılarla bağlı ilk tədqiqat işlərinə F. Moravitzin əsərlərində rast gəlinir. Beləki, Coelioxys castanea növünün ilk təsviri onun tərəfindən 1886-cı ildə Culfadan toplanılmış materiallar əsasında verilmişdir. XX əsrin ikinci yarısına qədər muxtar respublikada iynəli zarqanadlılara dair tədqiqatlar xarici mütəxəssislər tərəfindən aparılmış və çox zəif öyrənilmişdir. Yerli mütəxəssislər tərəfindən tədqiqatlar 1978-ci ildən aparılmağa başlanılmış, muxtar respublikada iynəli zarqanadlıların tədqiqi ilə X.Ə. Əliyev, G.F. Hüseynzadə və M.Q. Əliyeva məşğul olmuşlar. 2004-cü ildən başlayaraq M.M. Məhərrəmov tərəfindən Naxçıvan MR-in iynəli zarqanadlıları əsaslı şəkildə tədqiq edilməyə başlanılmışdır. 18 illik tədqiqat müddətində Naxçıvan Muxtar Respublikasının iynəli zarqanadlılar faunasının 14 fəsiləyə 148 cinsə mənsub 737 növ və 9 yarımnövdən ibarət olduğu müəyyən edilmişdir.

Açar sözlər: Naxçıvan, Apidae, Sphecidae, Crabronidae, Vespidae.

Аннотация

Сведения о первых энтомологических исследованиях, проведенных на территории автономной республики, относятся ко второй половине XIX века. Первые исследования жалящих перепончатокрылых на территории Нахчыванской АР относятся к работам Ф. Моравица. Таким образом, первое описание вида Coelioxys castanea им дано в 1886 году на основе материалов, собранных в Джульфе. Вплоть до второй половины XX века исследования жалящих перепончатокрылых в автономной республике проводились зарубежными специалистами и изучались очень слабо. Исследования местных специалистов начались в 1978 году, а исследованиями жалящих перепончатокрылых в автономной республике занимались Х.А. Алиев, Г.Ф. Гусейнзаде и М.Г. Алиева. Начиная с 2004 года М.М. Магеррамов начал всестороннее изучение жалящих перепончатокрылых Нахчыванской АР. За 18 лет исследований установлено, что фауна жалящих перепончатокрылых Нахчыванской Автономной Республики насчитывает 737 видов и 9 подвидов, относящихся к 148 родам за 14 семействам.

Ключевые слова: Нахчыван, Apidae, Sphecidae, Crabronidae, Vespidae.

The territory of the autonomous republic is one of the regions of Azerbaijan with a rich biodiversity of fauna. The first information about stinging hymenopteryx of the Nakhchyvan region is found in the works of F. Morawitz. F. Morawitz in 1886. was the first description of the species *Coelioxys castanea* based on materials collected in the vicinity of Julfa [Morawitz, 1886]. H.A. Aliyev studied the types of mountain and high-mountain zones, such as the natural region of Nakhchivan, their zoogeography and trophic relationships during the study of the bee fauna of the Lesser Caucasus. For the fauna of the Lesser Caucasus, 45 species of stinging hymenoptera have been registered in this region [Aliyev, 1986]. A.Z. Osichnyuk in 1993-1994. gave a new description of two species from Nakhchivan AP, belonging to the genus Andrena [Osichnyuk, 1994]. G.A. Huseynzade, when studying the bee family Halictidae, 37 species collected from the territory of the Nakhchivan Autonomous Republic were indicated in Azerbaijan [Huseynzade, 2000].

In the result of studies M.M. Maharramov taxonomic spectrum of the bee fauna of the Nakhchivan Autonomous Republic consisted of 335 species belonging to 6 families (Colletidae, Andrenidae, Halictidae, Melittidae, Megachilidae, Apidae), 16 subfamilies, 19 tribes and 47 genera [Bayramov et al., 2014].

M.G. Aliyeva, while studying the fauna of vespoids of the autonomous republic, discovered 61 species of bees, 4 of these species were synonymized, and currently 57 species are indicated [Aliyeva, 1986].

According to the literature data, the pompilid fauna of the Nakhchivan Autonomous Republic consists of 15 species belonging to 9 genera, the mutillid fauna consists of 1 family, 4 subfamilies, 11 species and 3 subspecies belonging to 9 genera, the skolid fauna consists of

species and 2 subspecies [Bayramov, et al., 2014]. The little-studied fauna of triffids is represented by three species belonging to the same genus.

When studying the samples collected in 2012-2020, 35 species and 3 subspecies belonging to the tribe Osminii, 16 species belonging to the tribe *Anthidiini*, and 17 species belonging to the tribes *Lithurgini, Dioxyini and Megachilini* were first noted for the fauna of Azerbaijan [Proshchalykin et al., 2019; Fateryga et al., 2020; Proshchalykin & Maharramov, 2020; Maharramov et al., 2021].

In 2018, when studying the subfamily Eumeninae in the Nakhchivan Autonomous Republic, faunistic information was given on 25 species, 10 of which were recorded for the fauna of Azerbaijan for the first time and 5 of them for the fauna of the Autonomous Republic (Fateryga et al., 2019).

In 2018-2019, when studying the family Crabronidae of the Nakhchivan Autonomous Republic, 188 species belonging to 40 genera were discovered, of which 120 species were recorded for the fauna of Azerbaijan for the first time, and the species *Hoplisoides flavescens* was first described for world science [Maharramov et al., 2018; Mokrousov et al., 2019; Mokrousov et al., 2020].

In 2018-2019, when studying the Sphecidae family in the Nakhchivan Autonomous Republic, 26 species belonging to 9 genera were found, of which 20 species were recorded for the fauna of Azerbaijan for the first time (Maharramov et al., 2020).

In general, at present, the fauna of stinging hymenoptera of the Nakhchivan Autonomous Republic includes 737 species and 9 subspecies belonging to 148 genera and 14 families.

The stinging hymenoptera of the Autonomous Republic will not be completed with the indicated numbers. We hope that with new research, the number of species in the autonomous republic rich in faunal complexes will gradually increase.

REFERENCES

Aliyev, Kh.A. (1986)/ Bees (Hymenoptera, Apoidea) in the biogeocenoses of the Lesser Caucasus of Azerbaijan: Abstract of the thesis. dis. ... cand. biol. sciences. Baku, 21 p. (in Russian)

Aliyev, M,G. (2008)/ Bioecological features of wasps-vespid (Vespoidea: Vespidae, Eumenidae) of the Nakhchivan Autonomous Republic and their significance: Abstract of the thesis. dis. … cand. biol. sciences. Baku, 20 p. (in Russian)

Bayramov, A.B., Maharramov, M.M., Mammadov, I.B. Gasimov, A.Q., Mammadov, A.M. (2014). Taxonomic spectrum of the invertebrate fauna of the Nakhchivan Autonomous Republic. Nakhchivan: Ajami. 320 p. (in Azerbaijan)

Fateryga, A.V. Proshchalykin, M.Yu., Aliyev, Kh.A., Maharramov, M.M. (2019). To the knowledge of eumenine wasps (Hymenoptera: Vespidae: Eumeninae) of Nakhchivan Autonomous Republic of Azerbaijan. *Far Eastern Entomologist*, 379, 25-32.

Fateryga, A.V., Proshchalykin, M.Yu. Maharramov, M.M. (2020). Bees of the Tribe Anthidiini (Hymenoptera, Megachilidae) of Nakhchivan Autonomous Republic of Azerbaijan. *Entomological Review*, 100(3), 323-336.

Huseynzade, G.F. (2000). Bees of the family Halictidae of Azerbaijan: Abstract of the thesis. dis. ... cand. biol. sciences. Baku, 28 p. (in Russian)

Maharramov, M., Aliyev, K., Mammadov, A. (2018). The wasp genus Tachysphex Kohl, 1883 (Hymenoptera: Apoidea: Crabronidae) in Azerbaijan, Caucasus. *Acta Zoologica Bulgarica*, 70(4), 453-457.

Maharramov, M.M., Fateryga, A.V., Proshchalykin, M.Yu. (2021). Megachilid bees (Hymenoptera: Megachilidae) of the Nakhchivan Autonomous Republic of Azerbaijan: Tribes Lithurgini, Dioxyini, and Megachilini. *Far Eastern Entomologist*, 428, 12-24.

Maharramov, M.M., Mokrousov, M.V., Proshchalykin, M.Yu. (2020). New distributional records of the family Sphecidae (Hymenoptera) in Azerbaijan // *Caucasian Entomological Bulletin*, 16(1), 43-47.

Mokrousov, M.V., Proshchalykin, M.Yu., Aliyev, Kh.A., Maharramov, M.M. (2019). To the knowledge of digger wasps (Hymenoptera: Crabronidae) of Nakhchivan Autonomous Republic of Azerbaijan. *Far Eastern Entomologist*, 394, 1-24.

Mokrousov, M.V., Proshchalykin, M.Yu., Maharramov, M.M. (2020). Digger wasps of the genus Hoplisoides Gribodo (Hymenoptera, Crabronidae, Bembicinae) from the Palaearctic region, with description of two new species. *Journal of Hymenoptera Research*, 79, 213-233.

Morawitz, F. Neue transcaucasische *Apidae.* (1886). *Horae Soceetatis Entomologicae Rossicae,* 20, 57-81.

Osychnyuk, A.Z. (1994). New subgenera and species of Palearctic andrens (Hymenoptera, Andrenidae). Soobshcheniye 3. *Vestnik zoologii*, 4-5, 17-23. (in Russian)

Proshchalykin, M.Yu., Maharramov, M.M. (2020). Additional records of osmiine bees (Hymenoptera: Megachilidae: Osmiini) from Azerbaijan. *Acta Biologica Sibirica*, 6(1), 33-42.

Proshchalykin, M.Yu., Maharramov, M.M., Aliyev, Kh.A. (2019). New data on the tribe Osmiini (Hymenoptera: Megachilidae) from Azerbaijan. *Far Eastern Entomologist,* 383, 12-20.